



STRATEGIC WOLF MANAGEMENT PLAN

DRAFT PLAN

Prepared by Alaska Department of Fish and Game, Division of Wildlife Conservation

September 9, 1991

Purpose

The purpose of this plan is to help the Alaska Department of Fish and Game (ADF&G) work with the public and other agencies to develop a management plan for wolves. ADF&G asks you to read this draft and let us know if you have any comments or ideas. We will use this draft to help the Board of Game, which meets on September 25 and October 23, 1991, to make comments through the meeting. Then we will develop the strategic wolf management plan and begin to identify zones in Alaska.

The goals of this wolf management plan are:

- 1) To conserve populations of wolves, their prey and wolf habitat throughout their historic range in Alaska.
- 2) To provide the broadest possible range of uses and values of wolves and their prey that meet wildlife conservation principles and public demand.
- 3) To help the public become more aware of and better understand the uses, conservation and management of wolves, their prey and habitat in Alaska.

Inside

- Strategy for a fair solution . . . 2
- Proposed zone system . . . 2
- Research program . . . 2
- Alaska wolf management team . . . 2
- Emergency situations . . . 2
- Information and education program . . . 2
- Biology of wolves in Alaska . . . 2
- Glossary . . . 2

An Introduction:

Strategic Wolf Management Plan for Alaska

Wolves exhibit remarkable endurance, intelligence, and sociability and have keen hunting abilities. Because of these characteristics, public attitudes concerning wolves are quite diverse. To some the wolf is a symbol of northern wilderness, but to others the wolf is viewed as a powerful predator capable of controlling prey populations such as moose and caribou that people need.

Wolves are thriving throughout nearly all of their historical range in Alaska. Like all of Alaska's wildlife, wolves are an important resource to both Alaskans and people in other states and countries. Alaska is large enough so that many human uses of wolves and their prey can be accommodated simultaneously in different portions of the state. The future of the wolf is secure here.

ADF&G's Division of Wildlife Conservation is responsible for managing wolves and other resi-

dent wildlife species on all lands except within the original Denali, Glacier Bay and Kaimai National Parks (these were created before statehood in 1959). Since statehood, federal laws, regulations and policies have placed more constraints on state wildlife management on some federal lands. In drafting this plan we have tried to consider all legal mandates and restrictions.

This strategic management plan is consistent with the Alaska Constitution, Title 16 of the Alaska Statutes and all policies and goals based on these documents. This plan focuses on wolves, but we also considered the interaction between wolves, prey and habitat. Because the public demands many different types of wolf management, ADF&G proposes a zonal management system. We realize that no plan will please everyone, but we hope to work toward a final plan through a fair and open public process.

History:

Wolf Management in Alaska

Wolves and people have coexisted in Alaska for thousands of years. Aboriginal Alaskans hunted and trapped wolves, and occasionally took young wolves from dens to reduce populations in some areas. However, aboriginal use had little effect on wolf populations. Wolf numbers were largely controlled by the availability of prey.

Early in this century there was a period of indiscriminate, but largely unsuccessful, wolf control conducted by both the government and private individuals. Bounties were also paid for wolves, but there is little evidence that this reduced wolf numbers. During the 1950's, the federal government conducted systematic wolf control using poison and aerial shooting to reduce wolf numbers in many parts of the state.

When Alaska became a state, the newly formed ADF&G moved quickly to classify wolves as both big game animals and furbearers. All wolf control programs were suspended in the belief that predation by wolves was relatively unimportant in regulating prey populations. Bounty payments were stopped in the late 1960's, and ADF&G supported the repeal of the bounty system by the legislature. Depressed wolf populations rapidly recovered because of these protective measures and the abundant prey populations that resulted, in part, from the federal control efforts of the 1950's.

In the late 1960's and early 1970's a series of severe winters coincided with high numbers of wolves and bears and, in some areas, excessive harvests of moose and caribou by people. Prey populations declined rapidly over much of Alaska. In response to these declines, ADF&G reduced or eliminated hunting of moose and caribou, embarked on a cooperative program of wildland fire management to improve habitat and conducted limited wolf control programs to restore prey abun-

dance in several important hunting areas. In some areas these programs succeeded in bringing prey and wolves back to abundant levels and benefited people by allowing them more use of the wildlife populations.

ADF&G's use of wolf control in the late 1970's and early 1980's resulted in major public controversy and lengthy legal challenges. These challenges were later extended to include both department conducted control programs and regulations which allowed hunters or trappers to use airplanes to locate wolves and then land to shoot them. ADF&G was confronted with the problem of trying to manage wolves to satisfy increasingly polarized user groups.

To change the decision-making process from one of periodic confrontation between different interests to one of constructive dialogue and resolution, ADF&G initiated a citizens participation process involving a broad range of public interests. ADF&G identified several ways in which the public could be constructively involved in the problem-solving and decision-making process.

One example of involving the public was the Alaska Wolf Management Planning Team. This twelve member citizens advisory group represented a broad range of publics and their values. The team was created in 1990-91 and met monthly over a six month period. They made numerous recommendations regarding wolf management, including 1) creating a zonal management system, 2) taking steps to protect wolf habitat, 3) continuing research, 4) expanding the information and education program, and 5) developing opportunities for the public to view wolves. The team's complete report is included in appendix B. ADF&G generally endorses the team report and uses it as the basis for this strategic plan.

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To comment on this plan, contact the Alaska Department of Fish and Game (addresses on cover)

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Strategy for producing a fair system for wolf management in Alaska

Developing a Zonal Management System

ADF&G cannot satisfy all legitimate demands for wolves in the same place at one time. As a result, we propose a zonal management system to manage different parts of the state in different ways to accommodate different public demands for protection and use of wolves, their prey and habitat.

At this stage, ADF&G is trying to finalize a zonal management system. We need to decide how many different zones (i.e. types of management) are needed, what values and goals will be pursued in each zone and what types of human activities will be permitted in each zone.

This draft plan proposes using six management zones. The goal of ensuring the long-term conservation of wolves, their prey and habitat applies to

all zones. The zones would provide a range of management systems from areas of complete protection for wolves, prey and habitat from human activities to areas of intensive management.

Applying a Zonal Management System

When a final decision is made about the number and types of management zones, we will work with the public and land owners/managers to determine locations for the zones. This process will produce a map to guide how and where wolves, their prey and habitat will be managed. We anticipate that the zones will be in place for ten years to provide continuity to management. The public will be involved in the decision-making process if it becomes necessary to modify zones and boundaries because of unpredictable events.



Developing

Area-Specific Management Plans

After decisions have been made about zone boundaries, we will work with the public, local fish and game advisory committees and the Alaska Board of Game to write area-specific management plans. (See the section on area-specific management plans for details.) These plans will contain specific population and management objectives and determine the management activities that will be used to achieve those objectives within the broader constraints of the zonal system.

A Proposed Zonal Management System

Zone 1 - Full Protection

Human use goals in this zone are:

1. to provide areas where wolves, prey and habitat are fully protected from human influence and are affected only by natural environmental factors.
2. to provide opportunities to view, hear and enjoy wolves and prey in an unaltered environment.
3. to provide opportunities for scientific study of wolves where human influence is minimal.

Conditions of use and management:

Hunting or trapping of wolves or prey is not allowed. Habitat manipulation is not allowed. Human activities and developments are regulated to keep disturbance of wolves and prey to a minimum.

Zone 2 - Minimum use/Minimum management

Human use goals in this zone are:

1. to provide areas where wolves and prey are not significantly influenced by people and are primarily affected by natural environmental factors.
2. to provide opportunities to view, hear and enjoy wolves and prey in nearly unaltered environments.
3. to provide opportunities for scientific study of wolves where human-caused mortality and manipulations are not significant factors.

4. to allow people the opportunity to harvest a small portion of the wolf and prey populations to meet special needs.

Conditions of use and management:

Hunting and trapping of wolves and prey is allowed, but harvests will be very low and limited to subsistence use in most areas. Land-and-shoot taking and wolf population reduction are not allowed. Habitat manipulation is not allowed.

Zone 3 - Moderate use/Minimum management

Human use goals in this zone are:

1. to provide areas where wolves and prey are primarily affected by natural environmental factors, but some influence by people is permitted.
2. to provide opportunities to view, hear and enjoy wolves and prey in an environment that has been slightly altered.
3. to provide for moderate harvests of wolves and prey by people.

Conditions of use and management:

Hunting and trapping of wolves and prey are allowed, but harvest rates will be kept low to moderate by regulation or remote access. Land-and-shoot taking and wolf population reduction are not allowed. Habitat manipulation is either not allowed or is not contemplated at this time.

Zone 4 - Moderate use/Moderate management

Human use goals in this zone are:

1. to provide areas where wolves are influenced by both natural environmental factors and by people.
2. to provide opportunities to view, hear and enjoy wolves and prey under managed conditions.
3. To provide for moderate harvest of wolves and prey by people.

Conditions of use and management:

Hunting and trapping of wolves and prey are allowed. Moderate harvest rates will be maintained. Land-and-shoot taking and wolf population reduction are generally not allowed, but may be considered if an emergency situation develops. Habitat manipulation may occur.

Zone 5 - High use/Moderate management

Human use goals of this zone are:

1. to provide areas where wolves and prey are managed for human benefit.
2. to enhance opportunities to view and enjoy wolves and prey.
3. to provide for high harvests of wolves and prey by people.

Conditions of use and management:

Hunting and trapping of wolves are allowed and may be encouraged. Wolves and prey will be managed to provide for moderate to high harvests. Land-and-shoot taking is allowed under permit. Wolf populations may be regulated at levels below those which would occur naturally. Wolf population reductions are not planned during the next ten years, but may be considered if emergency situations develop. Habitat manipulation is allowed.

Zone 6 - High use/intensive management

Human use goals of this zone are:

1. to provide areas where wolves and prey are intensively managed for human benefit.
2. to provide for high harvests of wolves and prey by people.

Conditions of use and management:

Hunting and trapping of wolves are allowed and may be encouraged. Wolves and prey will be managed to provide for sustained high harvests. Land-and-shoot taking is allowed under permit. Wolf population reduction is allowed but only in those portions of zone boundaries for reduction during the management plan planning process. Habitat manipulation is allowed.

ACTIVITIES ALLOWED IN DIFFERENT ZONES

	Viewing, hearing & photography	Hunting & trapping harvest level	Habitat manipulation	Some day airborne wolf hunting	Land & shoot wolf hunting	Wolf population regulation	Wolf population reduction
Zone 1	YES	None	NO	NO	NO	NO	NO
Zone 2	YES	Very Low	NO	NO	NO	NO	NO
Zone 3	YES	Low to Moderate	NO	NO	NO	NO	NO
Zone 4	YES	Moderate	YES	* to be determined	in emergency situations only	in emergency situations only	in emergency situations only
Zone 5	YES	Moderate to high	YES	* to be determined	YES	YES	in emergency situations only
Zone 6	YES	High	YES	* to be determined	YES	YES	YES in portions

* see definition in glossary (page 8). If the Board of Game approves this activity, we suggest a distance of at least 1/4 mile be required between the airplane and the shooting location. Some day airborne hunting will be discussed during Fish & Game Advisory Committee meetings and other public meetings prior to ADF&G making a recommendation to the Board.

FINAL REPORT

Alaska Wolf Management Planning Team

June 3, 1991

CHAPTER I.

INTRODUCTION

Wildlife in Alaska is managed by the Alaska Department of Fish & Game, Division of Wildlife Conservation. Policy guidance is provided by the State Board of Game. Wolf management in Alaska has become more and more difficult because social values have changed over the years and the public has voiced different demands for wolves. Conflicts between people with different interests concerning wolves have become intense, and many discussions of how wolves should be managed in Alaska have resulted in unproductive confrontations. Because conflicts have not been effectively resolved, different interests have become more polarized.

The consequence of failing to develop a different approach to resolving the existing conflicts would be that everyone interested in the long-term welfare of Alaska's wildlife would suffer. People who favor the more extreme types of management might find their influence dramatically affected by changes in elected officials or people appointed to the Board of Game. Guarding their viewpoints and enforcing their desires would require constant lobbying efforts. The Division and the Board would spend more time and money dealing with the controversy of wolf and prey management at the expense of other important activities. In summary, strife between user groups would keep people interested in wolves and the Department from working together in an effective partnership for wildlife conservation in Alaska.

The Alaska Wolf Management Planning Team was created in November 1990 to try to forge an agreement on new approaches to wolf management in the state. Representatives from both the State Department of Fish & Game and the State Board of Game indicated at the beginning of the process (and reaffirmed often) that it was their intent to draft policy, review and, as necessary, redraft regulations, based on the consensus recommendations of the team. (Everyone concerned understands that such policy and regulations will be publicly reviewed as required by statute.)

The team was comprised of a diverse group of individuals representing a broad diversity of opinions about how wolves should be managed. A list of team members is included in Appendix A. Team members participated as private individuals, not as formal representatives of groups or agencies.

The team met monthly over a six-month period beginning in November 1990 and concluding in April 1991. The process was facilitated by Connie Lewis from the Keystone Center, a nonprofit organization specializing in resolution of public policy conflicts. The team's analysis and discussion included 1) an exhaustive review of information about wolf biology, predator/prey relationships, population dynamics, post control efforts, hunting and trapping statistics, etc., 2) respectful consideration of every team member's interests and concerns about wolf management, 3) development of findings, goals and principles, 4) two public forums, and 5) wide ranging consideration of Management options.

Because of the diversity of opinion that existed with the team, every team member was required to make significant compromises to achieve a group consensus. Every team member did not support every recommendation. Rather, everyone agreed to a package of recommendations that, taken as a whole, represented a fair and equitable attempt to balance interests and needs that often conflicted. The recommendations contained in the final report are the best solution that a diverse group of individuals who care deeply about wolf management could produce, with current information, to minimize the conflict that has existed over wolf management for the past several years, while protecting wolf and ungulate populations and allowing for human use.

A few of the key terms used in the Report are:

Consumptive use—Legal participation in wildlife harvest; as well as appreciation of intrinsic value of wildlife.

Wolf control—A program to reduce the wolf population in an area.

Wolf Management—Management of the whole system, including habitat, prey and other predators.

Nonconsumptive use—Nonharvest enjoyment of wildlife; appreciation of intrinsic value of wildlife.

See the glossary in Appendix B (page 6) for definitions of other terms used in the Report.

CHAPTER II.

FINDINGS

1. Wolves have intrinsic value and provide multiple values to society.
 - Consumptive and nonconsumptive use.
 - Worldwide symbol of wilderness to many people.
 - Role in nature as an integral component of natural food chains.
 - Contribution to rural economies.
 - Special social/cultural relationship to people in rural Alaska.
2. Wolves exist as part of a complex ecological system and Alaska land ownership is complicated, therefore successful wolf conservation requires integrated protection and preservation of habitat and prey species and an opportunity for the meaningful involvement of all interested user groups.
3. The wolf population in Alaska is not endangered. It is distributed throughout the State. The current statewide population is estimated at approximately 6000, but the population will increase to levels beyond human control.
4. Wolf populations can sustain harvest, but sustainable harvest requires careful management.
5. Alaska is fortunate to have one of the larger wolf populations in the world and currently has extensive habitat and prey. Therefore, we have a special responsibility to ensure that wolves and their habitat are conserved.
6. Wolves can effect prey populations and in some situations can keep prey populations at low levels. Human intervention can speed recovery of the prey population in some cases.
7. Wolves are vulnerable to the growing human population, habitat fragmentation, disease, development, reduction in prey populations, and habitat conversion such as livestock grazing and agriculture.
8. Wolves and their prey are of vital importance to the economy and the needs of people in many areas of rural Alaska. Therefore, conservation efforts are necessary for rural Alaska.
9. The use of snowmachines can, in some circumstances, have an adverse impact on wolf populations.
10. The Department currently has no ability to regulate wolf hunting and overkills can have adverse effects on wildlife.
11. Breeding of wolf-dog hybrids creates potential problems for wolf management, disease, genetic contamination, and harm to public perceptions of wild wolves.

CHAPTER III.

GOALS & PRINCIPLES

A. GOALS

1. Ensure the long-term conservation of wolves throughout Alaska.
2. Provide for consumptive and nonconsumptive uses and values of wolves and their prey, consistent with the principles of wildlife conservation and with due consideration to public review and comment.
3. Help increase public awareness, understanding and agreement on wolf conservation and management in Alaska.

B. PRINCIPLES

1. Minimize conflict between interest groups. Adopt conflict management tools that are most effective but least controversial.
2. Adopt a statewide wolf Management plan that recognizes difference in Management goals across various land jurisdictions and Management sites/within jurisdictions.

Members of the Alaska Wolf Management Planning Team 1990-91

Bob Ahgook	(subsistence hunter and trapper, Anaktuvuk Pass)
Scot Bothwell	(sportsman, Fairbanks)
Valerie Brown	(environmental activist, Anchorage)
Dave Cline	(National Audubon Society, Anchorage)
Ray Collins	(member of the McGrath Fish & Game Advisory Committee and the Interior Regional Council, McGrath)
Peggy Cowan	(education specialist, Juneau)
John Doore	(wolf enthusiast, Anchorage)
Robert Heyano	(hunter and trapper, Dillingham)
Larry Holmes	(member of the Anchorage Fish & Game Advisory Committee, Girdwood)

Chuck McMahan	(hunter, trapper and pilot, Glennallen)
Wayne Regelin	(Deputy Director of Wildlife Conservation, Fairbanks)
Ann Ruggles	(environmentalist, Fairbanks)
Dean Wilson	(fur buyer, Copper Center)
Jack Lentler	(Board of Game)
Connie Lewis	(Facilitator)
Dale Kohlmoos	(Division of Wildlife Conservation staff coordinator)
Agency Representatives	
Jack Capp	(United States Forest Service)
Paul Schmidt	(United States Fish & Wildlife Service)
Steve Shackleton	(National Park Service)
Gene Terland	(Bureau of Land Management)

FINAL REPORT

3. In those areas where populations of wolves and prey are manipulated, pursue Management strategies to prevent prey populations from declining to a point where predation is preventing prey recovery.
4. Wolf management should consider wolves in the context of the total ecosystem. Because of the interconnectedness of prey, wildlife users, predators and habitat, it is in the best interest of all wildlife users to ensure quality Management of all components of the system.
5. The immediate and cumulative effects of habitat loss and fragmentation should be addressed in the Management of wolves and their prey.
6. Provide protection for the genetic diversity of wolf populations. We should be more concerned with the genetic diversity of isolated wolf populations (e.g., southeast Alaska) than with populations that disperse widely and freely.
7. Develop a program that will allow the managers flexibility to take necessary emergency action consistent with approved Management policies, procedures and objectives.
8. The regulations to implement wolf harvesting methods should be understandable, enforceable and consistent.
9. A wolf Management program should include both public information and education programs.
10. Wolf Management should provide meaningful opportunities for both consumptive and nonconsumptive user groups.
11. An adequate level of funding for wildlife Management in the State should be ensured.
12. Effective wolf conservation and Management will require ongoing research and monitoring.
13. Assume that wildlife law enforcement and penalties are adequate to ensure compliance with regulations.

CHAPTER IV.

STRATEGIES

A. HABITAT CONSERVATION

In arctic and sub-arctic environments, sustainable wolf populations are dependent on maintaining large tracts of unfragmented habitat which is highly productive of their principle prey species; moose, caribou, sheep, and deer.

Recommendations:

1. Since wildlife Management considerations were integral in the development of the state's fire management plans, the team endorses those plans, especially as they seek to reestablish natural fire regimes.
2. Prescribed burning and natural fires, where appropriate, should be used for habitat enhancement.
3. Where resource development is to occur, those practices which have the least impact on wolves and their habitat are to be encouraged.
4. Incompatible development should be discouraged in sensitive wildlife areas.
5. Because reindeer herding and other livestock grazing is incompatible with the conservation of wolves and their primary prey, the impact on wolves should be considered in any future plans to expand reindeer herding or livestock grazing beyond the locales where it is currently practiced.
6. Since game farming can seriously threaten native wildlife through the introduction of disease, conversion of natural habitat to game farms should be discouraged.
7. State wildlife managers should be required to address the needs of wolves and their prey when commenting on permits for development activities that will significantly affect wolf habitat.
8. Since designated wilderness areas can protect high quality wolf habitat for the use and enjoyment of hunters, trappers, and wolf users, designation of such areas should be encouraged where appropriate.

B. ENFORCEMENT

There is a need for additional funding and staffing for wildlife enforcement efforts related to wolf conservation.

Recommendations:

1. Increase the penalty for the second conviction for the same infraction of wildlife related regulations. Increase the penalty for the first conviction of certain infractions, e.g., wanton waste and hunting within the boundaries of National Parks established before 1980.
2. Increase funding for wildlife protection throughout Alaska.
3. The Department should publish concise, readable interpretations of all hunting regulations, including the regulations governing use of motorized vehicles for access.
4. The terms "herding", "molesting", and "driving" used in the regulations covering use of motorized vehicles for access to hunting need to be defined.
5. Snowmobile use may need to be more carefully regulated to avoid damage to wolf populations or unduly jeopardizing other uses.
6. Fines collected from people convicted for wildlife related offenses should be routed to the Division of Wildlife Protection.

7. Encourage the Department to establish a breeding program for the breeding of hybrid wolves.

C. NONCONSUMPTIVE USES OF WOLVES AND THEIR PREY

Growing numbers of people are seeking aesthetic enjoyment of wolves in the wild. Managers should make accommodations for this type of use in the wolf management programs consistent with overall wildlife management priorities.

Recommendations:

1. Nonconsumptive enjoyment of wolves should be encouraged, however, to minimize disturbance to wolves, their prey and other wildlife.
2. Management of National Parks, National Wildlife Refuges and State Parks should give special consideration to people wanting an experience with wild wolves.
3. The Alaska Department of Fish and Game should seek ways to incorporate management programs to encourage nonconsumptive aesthetic enjoyment of wolves.
4. The Department should establish viewing areas where there is best chance of observing and/or filming wolves. Interpretive and educational support must be provided for these areas.
5. The Department should develop guidelines for wolf watching. This should be thoroughly researched to minimize impacts to wildlife and other users. A means to regulate overuse must be developed in order to control the level of use in some areas.
6. Buffer zones should be established that will allow more protection for wolf packs around category "a" lands; e.g., around Denali National and State Park.

D. CONSUMPTIVE USE OF WOLVES

We recognize that the wolf population will fluctuate naturally over time. Population goals will be set for game management units or subunits through operational management plans that consider all relative biological factors. Maintaining a healthy prey base is vital to overall conservation of wolves. Enforcement of game regulations is an essential element of wildlife Management and is important for maintaining public trust.

Recommendations:

1. The wolves of Alaska will be maintained at a healthy and viable population level.
2. Wolf harvest should be consistent with sustained yield Management and within the operational Management plans.
3. Seasons and bag limits for prey should be consistent with maintaining a healthy prey base.
4. If a decline in ungulate prey species causes a wolf population to decline below the minimum desired population level, then human harvest of the ungulate prey species should be curtailed.
5. If the wolf population in an area is below the desired level for an area, then institute harvest restrictions (e.g., shorter seasons, reduced bag limits, restrict ways and means of hunting) to increase the population.
6. When there are insufficient prey to meet the needs of all user groups in a sustained fashion, limit use in the following order: commercial (nonresident) first, commercial (resident) second, and public and subsistence last.
7. As ungulate populations increase, populations of wolves should also be allowed to increase.
8. If a wolf population becomes depressed, hunting and trapping of wolves should be restricted in such a way that disturbance to the prey is minimized.
9. Existing bag limits and seasons for wolf hunting should be reviewed.

E. OPERATIONAL MANAGEMENT PLANS

The Division of Wildlife Conservation should develop operational management plans for each game management unit (some units may be combined). Plans should be developed within one year for high priority game management units. The Division should establish a goal of completing all the plans within six years. The plans will be reviewed on a ten year cycle. Operational Management plans will be developed through a public process involving local Fish & Game Advisory Committees, the general public, an Interagency Wolf Specialist Group, and the Board of Game. The Interagency Wolf Specialist Group will consist of three or four agency and/or university biologists, that have expertise in wolf biology and management. They will be recommended by the land management agencies and university and then appointed by the Commission. Their role in reviewing the operational Management plans will be to ensure that they are viable over time.

The operational management plans should include the following components.

1. Describe the area, topography, vegetation, etc.
2. Describe historical harvest patterns, seasons, bag limits, public need for food, etc.
3. Describe opportunities for nonconsumptive uses of wolves and identify areas where opportunities can be increased.
4. Set population and harvest goals for ungulates and predators based on principles of wildlife management and the concepts of carrying capacity (use carrying capacity only for deer and moose).

FINAL REPORT

5. Zone areas into various levels of management intensity:

- Areas where no hunting, trapping, or wolf control is allowed. Examples of such areas are long established National Parks (2% of the State). These areas may be expanded, through the operational management plans, by including portions of new national parks, national wildlife refuges, state parks, and road corridors, especially where wildlife viewing opportunities exist.
- National Parks and Monuments established by ANILCA where hunting or trapping are permitted only for local residents that qualify as federal subsistence hunters. No same-day-airborne hunting of wolves is allowed. No wolf control is allowed. These areas cover 7% of the State.
- National Preserves created by ANILCA where hunting and trapping are allowed for the general public. No same-day-airborne hunting of wolves is allowed. No wolf control is allowed. These areas cover about 5% of the State.
- National wildlife refuges where hunting and trapping are allowed for the general public. Wolf control is permissible, but only when compatible with the purposes for which the refuge was established and under stringent conditions. These areas cover about 20% of the State. Same-day-airborne hunting should not be allowed.
- Areas where hunting and trapping are allowed for the general public. The Team was divided on the issue of whether same-day-airborne hunting of wolves be allowed. No wolf control is allowed except in those areas designated for intensive management (under category f). These areas include portions of state lands, BLM, private owned lands, and military lands.
- Areas where the objective is through intensive management to maintain a high sustainable harvest of wolves and their prey while ensuring their conservation over time. Hunting and trapping are allowed for the general public. The Team was divided on the issue of whether same-day-airborne hunting should be allowed. Wolves can be subjected to control when it is needed, under the criteria and methods described in section IV.F of this report. These Intensive Management areas should be no larger than absolutely essential to achieve specific management objectives as specified in operational management plans. Wolf control is not intended to be a common practice. The team recommends that intensive management designations will be established only in a small portion of state game management units. These areas would include portions of state lands, BLM, private owned lands, and military lands.

The definition of "same-day-airborne hunting" in current ADF&G regulations is: "Not hunt big game or help someone else take big game the same day airborne until after 3:00 a.m. the next day. However, this section does not apply if you have flown on an airplane that is a regularly scheduled jet airplane...". As written, this definition includes "land and shoot" which is a term in common use (i.e., it is not defined in the regulations) meaning to land an airplane as close as possible to the target animal(s) and then to jump out and shoot. The Team agreed that land and shoot, as currently interpreted by the USFWS, is almost impossible to practice without being in violation of the Federal Airborne Hunting Act and could not be permitted anywhere except as a means of control in intensive management areas (in which case an exemption to the Federal Airborne Hunting is provided). The Team was divided on whether in categories "e" and "f" to allow same-day-airborne hunting with certain constraints (e.g., a requirement for distance from the plane, within time of sight, or a certain length of time before shooting). Some members of the Team opposed same-day-airborne hunting of wolves, with or without added constraints because of problems with enforcement, also that it exempts wolves from the same protection given to most big game species. Some felt that same-day-airborne hunting will continue to convey a negative image of wolf hunting and the Alaska Department of Fish & Game to many members of the public. There was a concern among some other Team members that without land-and-shoot and/or same-day-airborne hunting there would be almost no opportunity for reasonable success for a sport hunter, resident or nonresident, to legally take a wolf in the winter when the hides are prime.

- Determine which methods and means for wolf control are allowable if intensive management is included as an option in any portions of the unit.
- Establish population levels, trends and predator/prey ratios that would trigger management action in intensive management areas.

F. WOLF CONTROL IN INTENSIVE MANAGEMENT AREAS

Intensive Management Areas are that portion of a state game management unit where wolves, ungulates and their habitats are intensively managed to provide sustainable high levels of human harvest, consistent with scientific principles of wildlife conservation.

If ungulates are declining and wolves increasing to undesirable levels based on the management plan, the first step will be to try to increase wolf harvest through normal hunting and trapping. If these steps are not successful, the following methods will be employed:

- Hire professional trappers to trap wolves. (This option may not be feasible in some areas.)

- Issue permits for "land and shoot" under the guidelines described below.
- Issue permits for members of the public to land and shoot under the guidelines listed below.

Recommendations:

If ungulates are declining and wolves increasing to undesirable levels based on the management plan, the following steps will be taken to manage the control:

- The Division will prepare a report containing all available information including wolf population and trends, ungulate population and trends, information on ungulates and wolves, predator/prey relationships, and habitat capability. Include information about how the report will be used. The report will recommend a level of reduction in wolf population established in the operational management plan. The report will be reviewed and reevaluated annually. In the first year of control, no more than 10% of the goal of the wolf population can be killed.
- Make the report available to the public, the Fish and Game Advisory Committee in the local area, and the Interagency Wolf Specialist Group for review by the Interagency Wolf Specialist Group and the public. Hold at least one public meeting in the local area and one in a major population center to solicit input on the report.
- If the decision is made to implement wolf control, the level of control identified in the management plan will be used. The level of control should be limited to the minimum amount of time necessary to achieve the desired level of wolf reduction. Conflicts with trappers should be avoided, if possible, especially at the onset of a control program.
- The criteria (standards) to be met before airborne hunters would be permitted to use aircraft to carry out wolf control in an intensive management area are:
 - A satisfactory level of biological data gathering is being provided on a continuing basis.
 - Knowledgeable local people are involved in gathering and reviewing biological data in close cooperation with wildlife managers and the appropriate Fish & Game Advisory Committee.
 - Wildlife biologists have provided the public and the Fish & Game Advisory Committee with periodic summaries (status reports) of the best available scientific information on wolves and ungulates including the results of any previous wolf control.
 - Federal and state law enforcement officers will be informed of and invited to cooperate in all of any wolf control actions prior to their initiation.
 - Approval of the wolf control actions must be obtained from the affected land manager or owner.
 - Airborne hunters will be issued permits pursuant to requirements of the Airborne Hunting Act.

5. Permitting Process for Airborne Hunters Conducting Wolf Control Within Intensive Management Areas:

The Department of Fish & Game will establish a process to enter into agreements and issue permits to hunters for land and shoot and for aerial permits. Minimum qualifications for receiving a permit include:

- Pilot and shooter must possess a resident trappers license.
- Pilot and shooter must have no prior convictions for violations under the license permitted for.
- The plane must carry a telemetry device provided by the Department of Fish & Game.

The number of hunters receiving permits will be limited. The Division of Wildlife Conservation will devise a process to rank hunters willing to participate in the control action. The ranking will be based upon knowledge of geography in the control area, ability as a pilot and ability to kill wolves. Each hunter will be allowed to kill a specific number of wolves in a specific area. The hunter must report the number and location of wolves killed within no more than five days.

RESEARCH

Recommendations:

- The Department of Fish & Game should continue research into wolf ecology, predator/prey and habitat relationships and nonlethal methods for reducing predation (including controlled scientific experiments). Where appropriate, the Department should pursue cooperative research efforts with other agencies. Research finding should be reported in a timely fashion and be made available in a form that is accessible to the public.

INTER-AGENCY AGREEMENTS

Recommendations:

Wildlife managers should coordinate their strategies across different land jurisdictions.

The Department of Fish & Game should cooperate with managers in Canada in those situations where wolf packs cross international boundaries.

APPENDIX B:

ALASKA DEPARTMENT OF FISH & GAME STRATEGIC WOLF MANAGEMENT PLAN

FINAL REPORT

EDUCATION & INFORMATION EXCHANGE

The team recognized that reaching the goal of increasing public awareness, understanding and agreement on wolf conservation and management in Alaska would require a number of vehicles, including both information and education. In keeping with the team's stated goal on education, the group made the following recommendations:

Recommendations: Information

1. Presentation of information should include:
 - a. A report about the current status of wolves, in Alaska, drawing upon the report produced by the Team.
 - b. An Alaska Wildlife Magazine wolf issue, produced by the Department of Fish & Game.
 - c. An information flyer for public and tourists.
 - d. Media:
 - A monthly question and answer newspaper column.
 - A public radio program series covering wolf biology and issues.
 - Public information video spots for television.
 - e. Enforcement criteria along with state regulations and state and federal statutes that pertain to wolf hunting and trapping.
 - f. A revised and updated Wildlife Notebook Series report on wolves.
2. Department information officers should work closely with staff biologists to provide accurate information to the media.
3. The Team should send a copy of the report generated by the Team to the Alaska legislature and encourage legislators to adequately fund wildlife education.
4. An informational flyer on wolves should be created and distributed for the Anchorage Convention and Visitor's Bureau and Alaska Department of Tourism, to be included as promotional material to encourage tourists to visit Alaska, and to be distributed to tour companies.
5. There should be an exchange of information between the Department of Fish & Game and others around the world who are involved with wolf conservation.
6. The International Union for the Conservation of Nature (IUCN) Wolf Specialist Group should include a member from Alaska.

Recommendations: Education

1. Create a conservation stamp and print program to provide funding and awareness by the public. Funds would be used for education.
2. General Public
 - a. Build a joint state and federal government wolf center (no live animals, i.e., not a zoo).
 - b. Create travelling displays and exhibits, that can rotate to museums, schools and community centers in rural Alaska.
 - c. Develop road waysides, in wolf habitat, describing the habitat, life history and ecological relationships of wolves. Include: human uses (historical and present and the importance of these activities, especially in rural Alaska); research techniques and sample results; how the department manages wolves; when and why wolf control may be necessary; range maps; what evidence people visiting Alaska may see of wolf presence (tracks, dens, rendezvous sites, trails, scats, howling) with examples, etc.
3. K-12 Students
 - a. Have the Department produce an Alaskan supplement about wolves for Project WILD.
 - b. Produce Primary, Intermediate, and Secondary "Alaska Wildlife Week" packets about wolves and their role in nature. Include:
 - Video or slide show
 - technical report/background information for teachers
 - Learning activities on wolves
 - Aides for featuring wolves in the school
 - c. Provide teacher workshops, team taught by teachers and biologists, using materials and providing background on wolves and management.
 - d. Encourage Department staff to make classroom presentation on wolf biology and Management.
4. Users
 - a. Require hunter/trapper education, including information on wolf management and conservation, and legal use of snow machines for access to hunting. Before obtaining a hunter/trapper license, completion of a course should be required. Initially this could be required of all people born after some date or people receiving their license for the first time and in specific game management units (principally along the road system). Existing programs developed by hunter/trapper groups should be used as nucleus for the development of the Department's educational programs (e.g., bowhunter and trapper education). Such a program will require creative mechanisms to include rural Alaskans, who eventually will also be required to participate. Possible methods for rural areas are RATNET, video training tapes, correspondence courses, use of public health officers.
 - b. Increase license fee or create user stamp to cover increased costs of mandatory training.

- c. Provide information to guides and other non-consumptive users to view wolves.

5. Guidelines

- a. Educational materials should include information about general Alaskan lifestyles and non-consumptive uses of the land and scenery.
- b. Educational materials should provide information about wolves and their values.
- c. Materials for schools should provide information about dealing with controversial issues.
- d. Materials for parents should be available in locally accessible and appropriate formats and consider the cultural values of Alaskan communities and villages.

PUBLIC PARTICIPATION

Recommendations

1. Encourage the public to participate in the public process of wildlife management in Alaska. This can be done by using the Fish and Game Advisory Committee system as a model. The committee is responsible for conducting the advisory committee to the Board of Game, and for local and regional groups and geography.
2. Facilitate an open public process for the development of the operational management plan.
3. All groups including those representing the national interest, should have equal access to and consideration during the Board of Game process.
4. The Team found the facilitated dialogue process used to develop this report to be very useful in addressing a highly-controversial wildlife issue. The Department of Fish and Game, as well as other agencies facing controversial public policy issues, should consider similar approaches in the future.

Terms used in game management and related enforcement

Aircraft: Any contrivance used for flight in the air (Airborne Hunting Act).
Breeding (or reproduction) potential: The maximum or unimpeded increase rate of a species in an "ideal" environmental.

Carrying capacity: The maximum density of wild game which a particular range is capable of carrying.

Chase: To pursue with intent to catch or harm.

Concentrate: To direct to a common point.

Conservation: (concept promoted by J. Roosevelt) It recognized all these "outdoor" resources as one integral whole. It recognized their "conservation through wise use," as a public responsibility, and their private ownership as a public trust. It recognized hunting as a tool for discharging that responsibility.

Density: The number of animals per unit area or other unit area carried by a game range.

Disturb: To destroy the tranquility of peace.

Drive: To push or propel onward with force.

Fair-chase: The concept of hunting which requires an advantage that would deprive the animal of using its natural escape mechanisms.

Wm. H. Nesbit and Philip C. Wright: The Big Game of North America
Big Game. The Big Game of North America.

Harm: To disturb; worry; molest; rally; concentrate; harry; chase; drive, herd or torment (50 CFR 99).

Harry: To lay waste, as in division. To harass in any way.

Herd: A number of animals feeding, moving about, or kept together. To bring together or move in a herd.

Limiting factor: The factor which outweighs all others in limiting productivity.

Mobility: The tendency of the individual animal to change location during the day, or as between seasons or years.

Molest: To disturb or molest; unwelcome, offensive, or malicious interference.

Productivity: The rate at which mature breeding stock produces other mature stock, or mature removable crop.

Sustained yield: Is the number of biomass or animals that can be removed from a population over a long period of time while assuring persistence of the resource.

Torment: Intense bodily pain or mental anguish; worry; torture.

Worry: A state of anxiety or vexation.

Yield: The sustained kill per unit area or population.

Area-Specific Management Plans

Staff of the Division of Wildlife Conservation will work with the public to develop area-specific management plans to guide management activities. Draft area-specific management plans will be circulated for public review. Wildlife biologists outside ADF&G will be asked to review the area-specific plans. Public meetings will be held in at least one local community and a regional center in the plan area to discuss the draft. Area-specific management plans will also be reviewed with the Board of Game before being implemented.

ADF&G will consider all relevant information about the ecology of wolves and prey which may affect management and use when area-specific plans are developed. The plans will be based on the best available information and will include:

- an area description (geographical area, vegetation, topography and land ownership);
- a summary of historical patterns of wildlife abundance, distribution and human use;
- current and projected patterns of wildlife abundance, distribution and human use;
- alternatives for coordinated management of wolves, other predators and prey;
- population management objectives for selected wildlife species;
- human use objectives;
- planned activities to maintain or achieve human use and population objectives.

Area-specific management plans will be drafted keeping the following concepts in mind.

Habitat conservation

Productive prey populations such as moose, caribou, deer and Dall sheep are necessary to support wolf populations. These species fare best where habitat is diverse and productive. Human activities which degrade or destroy habitat will harm prey populations, and ultimately the wolves and other large predators or scavengers which depend on them for food.

Throughout about 200 million acres of Alaska (55% of the state), periodic wildland fires maintain wildlife habitat diversity and productivity. Nutrients are recycled in the ecosystem primarily through wildland fires. ADF&G will continue to work closely with landowners and fire suppression agencies to let wildland fires burn in those areas where human lives and property are not at risk.

Techniques such as prescribed burning, mechanical disturbance of habitat, modified logging practices, and planting or fertilization of wildlife food plants in disturbed areas will be encouraged in those portions of zones 4, 5 and 6 where naturally-occurring fires cannot be tolerated.

Development that harms habitat will be discouraged in areas critical to wildlife. Where developments must occur, ADF&G will encourage the use of development practices that have the least effect on wildlife and wildlife users. The value of habitat for wildlife will carry more weight in future land development decisions if productive wildlife populations are present and are providing a variety of public uses.

Emergency Situations:

The Emergency Situation Plan

Despite our best efforts to plan for the future, no one can predict when conditions may require deviating from a planned course of action. If an unforeseen situation develops on zone 4, 5 or 6 lands that warrants emergency measures to prevent disastrous declines in prey populations ADF&G will prepare an emergency situation plan. The emergency situation plan will contain all the elements of an implementation plan. The goal of these plans would be to quickly begin temporary reduction of wolf numbers to avoid decimation of prey populations upon which people and wolves are dependent.

Preparing the emergency situation plan will include at least one public meeting in or near the area in which the emergency exists, and another meet-

Consumptive Uses of Wolves and Wolf Prey Species

Harvest of wolves and prey species must not threaten long-term population survival. Management objectives must ensure prospering populations of all species in the long-term.

If the wolf population in an area is below the objective level for reasons other than a shortage of prey, the harvest will be reduced. Depending on the seriousness of the situation, wolf hunting and trapping seasons will be shortened or closed.

If the wolf population in an area is below its objective level because of a shortage of prey, efforts will be made to increase prey populations.

If a wolf population in an area in zones 4-6 exceeds its objective level and in preventing prey populations from meeting population and/or human-use objectives, efforts will be made to increase wolf harvests. If wolf harvest by the public does not increase, ADF&G may take action to reduce wolf numbers in parts of zone 6.

Current regulations for hunting and trapping of wolves and prey species will be reviewed when area-specific management plans are being drafted.

Nonconsumptive Uses of Wolves and Wolf Prey Species

Nonconsumptive uses of wolves and prey species will be promoted. However, even in the best of circumstances, wolves are one of the most difficult species to observe and photograph.

Locations that offer unique opportunities to see or hear wolves will be identified, but disturbance to wolves should be minimized near dens and rendezvous sites. Habituation of wolves to people will be discouraged. Such locations often change over time and developments to improve chances to view or hear wolves may cause wolves to leave.

Wolf Population Regulation and Reduction

Because the same word can mean different things to different people, we have not used it in this plan. Instead we have used two other terms that more clearly say what is being done.

"Wolf population regulation" means maintaining the number of wolves in an area at a moderate size below what the prey could support. This might be done so that hunters can have a larger share of the prey population.

"Wolf population reduction" means further reducing the number of wolves to a low level. This action might be taken on a temporary basis to allow a prey population to grow.

Implementation Plans

If an area-specific plan calls for the regulation or reduction of wolf numbers on zone 5 or 6 lands, ADF&G will draft an implementation plan. Professional wildlife biologists outside ADF&G will be asked to review the implementation plan to ensure the affected wolf populations will remain viable over time. The Board of Game must adopt the implementation plan as a regulation before wolf numbers may be regulated or reduced. The

implementation plans are required by law to include:

- a statement of the proposed action;
- a justification for the proposed action;
- an area description;
- relevant information about wildlife population and human use, including wolf and prey population status and trend, harvest information, habitat and estimates of the effects of wolf and bear predation on prey populations;
- what the project is to accomplish and reduce population and/or human use objectives;
- estimate of the time frame for the wolf population and human use objectives;
- schedule for update and review.

Implementation plans will include information that could be used to estimate wolf and prey numbers. Not all options will be chosen. An implementation plan will include one or more of the following:

1. Trapper education or training of trapper(s) to trap wolves;
2. Nonlethal predation control measures when they are perfected;
3. Issuing public "land-and-shoot" permits with the guidelines described below;
4. Issuing public aerial shooting permits with the guidelines listed below;

5. Wolf population regulation or reduction by management personnel using aerial shooting and trapping.

If issuing public land-and-shoot or aerial shooting permits is approved by the board, ADF&G will establish a process for selecting permittees to assure that only qualified individuals obtain permits. Minimum qualifications for receiving a permit will include knowledge of the area geography and no prior convictions for hunting violations related to taking of wolves.

The number of permits issued will be limited. Each permittee will be allowed to take a specified number of wolves in a specified area. Permittees must report the number and location of wolves taken within no more than 30 days after the permit is required to carry a telemetry device provided by ADF&G.

Research Program

ADF&G will continue research into wolf ecology, predator-prey and habitat relationships, and nonlethal methods for reducing predation. Where appropriate, ADF&G will cooperate in research efforts with other agencies. Research findings will be reported in a timely fashion and presented in a form that is easily understood by the public.

Information and Education Program

We recognize that conservation and wise management of wolves depends on public awareness and appreciation of wolves. The public must also possess an accurate knowledge of wolves, their ecology, natural history and population status. ADF&G will continue to provide information on these aspects of wolf ecology. Information and education materials must be understood by the diversity of cultures and interests present in Alaska, as well as to interested parties in the rest of the country and in the world.

Information and education efforts may include leaflets and flyers; the Wildlife Notebook Series, Alaska Wildlife Magazine; newspaper columns; public and commercial radio and television news programs; public service announcements; advertising; contacts with the media; museum exhibits; static displays; and other educational programs and department staff presentations to school children, student classes, civic organizations, and other interested parties. In addition to the technical and scientific information available in the Final Report of the Management Planning Team.

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In compliance with the Alaska Public Information Act, the Department of Fish and Game has provided this document in a format accessible to the public.

Appendix A: Biology of Wolves in Alaska

DEER EFFECT

Wolves are present in Alaska for about 10,000 years. They occur throughout most of the state, but are most numerous in the Aleutian Islands and southeastern Alaska. Before the arrival of man about 10,000 years ago, Alaska was covered with grasslands which supported a wide variety of animals including bison, moose, caribou, muskoxen, Dall sheep, and elk. The wolf existed along with several other predators including the American lion, brown bear, short-faced bear and wolverine. As the climate became moderate and forests expanded, many grazing animals and some predators became extinct. However, the wolf is adaptable and continues to thrive in the Alaskan environment. Wolves occupy nearly all of their historic range, and are common over about 85% of Alaska. They are well adapted to habitats ranging from tundra to forest.

ADFG annually estimates wolf numbers and in 1990, approximately 5,900 to 7,200 wolves in 100 to 900 packs were believed to be in the state. Population densities range from about 1 wolf per 25 to 75 square miles in southern and interior areas to 1 wolf per 150 square miles in the coastal portions of northern and western Alaska. Wolves are more scarce in some coastal areas for several reasons. They are vulnerable to man in open country, suitable prey populations exist at low numbers or are nonexistent, and rabies outbreaks in wolves are common. Wolf numbers are stable or increasing in all occupied habitats. In most areas wolf density is about as high as the food supply will allow. Wolf distribution and abundance in recent years have been about as great as at any time since the turn of the century. The wolf population is prospering and is connected to a large and similarly thriving population that extends across most of Canada.

Since 1975, several hundred wolves in about 150 packs have been radio-marked in various parts of Alaska and studied for periods of two to eight years. In addition to dramatically increasing our understanding of wolf habits and social behavior of wolf packs, these studies have shown that long-range dispersals of up to 500 miles by individual wolves occur regularly. Each year one or more wolves depart from most resident packs and travel to other areas in Alaska and Canada, sometimes joining or creating new packs. This probably explains why physical characteristics of wolves are similar over this vast area. It is also one reason why wolves quickly acquire suitable habitat.

Although most packs include 6-12 animals, packs as large as 20-30 wolves sometimes occur. In most areas packs remain within a home range used almost exclusively by pack members in winter. The home range of most Alaskan packs includes 200 to 800 square miles during the winter. The ranges of neighboring packs often overlap slightly in winter and seasonally in summer. Wolves that depend primarily on caribou may abandon their home range when caribou travel long distances.

Wolves become active in February and March and average about five pups are born in May or early June. Most female wolves first breed when 2 years old but usually have fewer pups than older females. Wolves have a high reproductive rate. Nearly all of Alaska's wolf packs raise at least one pair of four to seven pups successfully each year.

Most mature females come into heat and breed each year and, in some cases, two or three females in a pack produce litters. Because they generally produce many pups, most populations can sustain harvests of 25-40% annually. With lower harvests most populations can increase, unless food is scarce. In Alaska most wolf populations sustain harvests of from 10% to 30%. In the past decade the annual harvest of wolves ranged from 675 to 1,097 and averaged 842, or about 11% to 14% of the estimated population. Because they produce many pups and commonly immigrate into new areas, Alaskan wolf populations can rebound quickly from relatively high harvest or other reductions in numbers.

In much of the state hunting and trapping are the major sources of wolf mortality. Death from natural causes, especially predation by other wolves, is also common and often accounts for more than 10% of the wolves in a given population each year. Disease does not appear to be a widespread cause of mortality except in some coastal areas where rabies acquired from foxes sometimes significantly reduces wolf numbers.

The diet of wolves varies according to season, location and prey species availability. Moose and caribou are their major prey over much of Alaska but Dall sheep are also taken. In southeast Alaska deer and mountain goats are important big game food sources. During winter big game species constitute almost the entire diet of wolves. Snowshoe hares can be an important food source in years of hare abundance. During summer, young ungulates are often an important part of the diet, but adult animals are also killed. Small animals such as beavers, snowshoe hares, voles, ground squirrels, and occasionally birds and fish can be important supplements.

Predator - Prey Relationships

Although wolves eat a wide variety of animals, they are dependent on large hoofed mammals, such as moose, caribou, deer, sheep and goats to sustain their populations in Alaska. The number of different prey species available to wolves in an area, the abundance of each prey species and other factors such as winter weather play an important role in determining how wolves affect prey populations. In addition, if other predators such as black or grizzly bears or human hunters are taking prey animals, the interactions of wolves and prey can be dramatically different.

Wildlife studies show that where wolves are the only predator, wolves do not keep prey numbers low. Likewise, if bears are the only predator, bears do not limit prey abundance. In contrast, studies show that the combination of wolf and bear predation often results in low numbers of moose, deer and sometimes caribou for long periods of time. Combined wolf and bear predation occurs throughout most of Alaska.

When predation succeeds in keeping moose numbers much lower than the habitat could support, the moose population is often said to be in a "predator pit". Wolves and bears keep moose in the predator pit by killing many moose that would otherwise live and reproduce, especially calves.

Caribou herds may also remain at very low numbers when preyed upon by both wolves and bears. Caribou, however, can sometimes escape the effects of wolf and bear predation by migrating,

by selecting calving areas with few predators, and by greatly outnumbering predators. Predation has less effect on large caribou herds than it does on small herds.

The effect of predation on deer is shown by changes in deer abundance since the severe winters in the late 1960's and early 1970's greatly reduced deer numbers in Southeast Alaska. Since then, deer numbers have remained low or recovered slowly on islands with wolves and black bears. In contrast, deer numbers rebounded quickly to very high densities on islands with brown bears but no wolves.

A certain portion of any prey population must survive to reproduce and maintain the herd. The rest can be killed by wolves, bears or people without causing declines in numbers. The size of this excess portion will vary over time in different areas and can be affected by wildlife management.

Naturally low prey numbers do not necessarily create a management problem. If people are satisfied with a small share of the prey, predator-prey relationships may not need to be altered to provide for desired harvests. On the other hand, if people want a larger portion of the prey, the level of predation by wolves and/or bears may have to be reduced. Balancing the allocation of prey between wolves, bears and people must be done on an area-specific basis.

Glossary:

Terms used in the planning process

Aerial shooting - The practice of taking or attempting to take wildlife by discharging a firearm from an airborne aircraft. Aerial shooting is not legal under general hunting regulations, but may be conducted under an administrative permit as authorized by the federal airborne hunting act.

Area-specific management plan - A plan detailing how wildlife, habitat and human uses will be managed in a portion of the state. These plans will identify population and human use objectives and management actions needed to achieve objectives.

Game Management Unit (GMU) - An area identified by ADFG for regulatory purposes. Alaska is divided into 26 game management units to aid in managing wildlife populations.

Land-and-shoot taking - Taking or attempting to take wildlife by landing a fixed-wing aircraft within shooting distance, exiting the aircraft, and immediately discharging a firearm at the wildlife. Such taking is not legal under general hunting regulations, but may be conducted under a permit as authorized by the federal airborne hunting act.

Same-day-airborne taking - Taking or attempting to take wildlife after landing a fixed-wing aircraft out of sight and/or leaving range of the wildlife, exiting the aircraft and proceeding to pursue and take the wildlife. Same-day-airborne restrictions are not intended to prohibit the use of firearms to dispatch animals caught in traps or snares near where the aircraft is landed.

Sustainable - A portion of a game management unit. Wildlife conservation - The wise use and information-based management of wildlife populations to maintain productive, viable populations capable of providing sustained harvest and other long-term benefits to society.

Wolf population regulation - Maintaining the size of a wolf population at a pre-determined level below that which the prey could support to provide for higher human use of prey populations.

Wolf population reduction - The temporary lowering of wolf numbers to a level significantly below the pre-determined, long-term level, to prevent or stop undesirable declines in prey numbers or to stimulate increases in prey numbers.

Zone - An area where a specific strategy for wolf management is applied. Zone boundaries will not necessarily conform to game management unit or other boundaries in the state.



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